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ABSTRACT

This report compares levels of staffing in the libraries of 20 midwest liberal arts colleges. (Noting that libraries all have different organizational structures and different types and levels of service, the study notes the danger of inappropriate comparisons.) Data for this paper were taken from "1982-83 Library Data: Associated Colleges of the Midwest" and "1982-83 Library Data: Great Lakes College Association." Tables and text present statistics on the following: enrollment and collection data; staffing levels; staff per full time equivalent students; librarians per support staff; hours of student assistance; hours of student assistance in full-time support staff equivalents; circulation and interlibrary loan transactions; circulation and interlibrary loan transactions correlated with professional staff and with total staff; enrollment and circulation correlated with reference questions; and volume total and enrollment correlated with circulation. The second part of the document, "Selected Library Statistics," presents statistical information on five 4-year colleges in northeastern Pennsylvania. The collection instrument used is a modified version of an instrument developed by the Council on Independent Colleges to examine staffing levels; the levels are divided by service area for professional and support staff. (THC)

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STAFFING IN TWENTY MIDWEST COLLEGE LIBRARIES: SOME NOTES ON COMPARATIVE DATA

with

SELECTED LIBRARY STATISTICS FOR 1982-1983

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STAFFING IN TWENTY MIDWEST

COLLEGE LIBRARIES: SOME NOTES ON COMPARATIVE DATA

These notes grew out of attempts to compare levels of library staffing with libraries around us and libraries across the nation. In examining library staffing data you quickly realize there is no reliable way to compare how libraries are staffed Not all libraries have the same organizational structure, nor do all libraries offer the same type or level of services. What follows is a quick attempt to examine staffing in twenty midwest liberal arts college libraries.

"Standards for College Libraries" attempted to establish standards for adequate college library programs.[1] The Standards include a formula for determining adequate staffing levels. However, the Standards are considered by many to be unrealistic and viewed only as ideal. An analysis of 1977 HEGIS data indicates that most college libraries failed to meet the Standards formula for staffing levels.[2] Staffing levels in most college libraries are based on historical allocations and not formulas. These allocations may have been increased in the boom years of higher education and reduced in its decline.

Quantitative based staffing formulas may be out of date with the situation in many college libraries today. When "Standards for College Libraries" was published, OCLC, microcomputers and automation were either not in existence or not widespread as they are today among liberal arts colleges. In the absence f a viable standard or national yardstick libraries are increasingly seeking and using comparative data.

Enterprising associations and individuals have attempted to provide institutions with comparative data. However, there are some dangers in using prepared comparative data. In some cases databases may be too small and

you do not know with whom you are being compared. Nor do you know how data was reported or the final data was arrived at. In one case a preparing agency has a record of not catching errors in analysis until someone using the data points them out to them.

Probably a better approach is for interested libraries to share their annual raw statistical data with each other. A number of these comparative lists exist. (See College and Research Libraries News, July/August 1983.) Some lists are better known than others such as the Bowdoin list. In using or compiling comparative data care must be taken to select colleges and libraries that are your peers or competitors. In order for libraries to make a good comparison they should compare themselves with peer institutions within their region. This gives them the added benefit and insight of perhaps knowing something about the other institutions they are being compared with. It is also good politics for the library to select colleges and libraries that are also viewed as comparable by the college administration.

Data for this paper on staffing levels was taken from 1982-83 LIBRARY DATA: ASSOCIATED COLLEGES OF THE MIDWEST and 1982-83 LIBRARY DATA: GREAT LAKES COLLEGE ASSOCIATION. Both sets of data were compiled by Dennis Ribbens, Librarian, Lawrence University, Appleton, Wisconsin. The twenty member institutions listed below are private liberal arts colleges with few if any graduate programs.

Albion
Antioch
Beloit
Carleton
Coe
Denison
DePauw
Earlham
Grinnell
Hope
Kalamazoo
Knox
Lake Forest
Lawrence
Macalester
Monmouth
Ripon
St. Olaf
Wabash
Wooster

According to formula B of "The Standards for College Libraries" the number of librarians a college library should have is determined by student FTE, book collection size, and annual book acquisitions.[3] The formula for calculating the number of librarians needed is:

One: For each 500 (or fraction) FTE student up to 10,000.

One: For each 1,000 (or fraction) FTE student over 10,000.

One: For each 100,000 volumes (or fraction) in the collection.

One: For each 5,000 volumes (or fraction) added per year.

TABLE I
Enrollment and Collection Data

	ENROLLMENT	TOTAL BOOK VOLUMES	BOOK VOLUMES ADDED 82-83
Mean	1,423	228,869	6,336
Median	1,181	222,752	5,717
Range	642 - 3,062	123,995 - 339,126	2,312 - 9,994

TABLE I provides information on student FTE and collections of the twenty Midwest institutions. According to the formula the average college library described in TABLE I needs 6.38 librarians. However, the average college library in this study has only 4.76 librarians, a difference of 25 percent (see TABLE II).

TABLE II
Staffing Levels

	LIBRARIANS	SUPPORT STAFF	TOTAL STAFF
Mean	4.76	7.94	11.7
Median	5	6.5	10.75
Range	2.8 - 7	2.5 - 13.5	4.5 - 19.5

The information in TABLE II is really of little comparative use until it is reduced to an easily compared ratio such as librarians or total staff per student FTE (see TABLE III). Standards call for the average library in this study to have 6.38 librarians. Using a ratio, 6.38 librarians is equal to one librarian per 223 student FTE. The average library in this study has a ratio of one librarian per 289 student FTE. Carpenter's analysis of 1977 HEGIS data revealed that 501 private undergraduate college libraries had a mean ratio of one librarian per 310 student FTE with a median ratio of 1:260.[4]

TABLE III
Staff Per FTE Student

	LIBRARIANS PER FTE STUDENT	TOTAL STAFF PER FTE STUDENT
Mean	1:289	1:123
Median	1:276	1:117
Range	1:165 - 1:437	1:88 - 1:175

In staffing a library the appropriate mixture of librarians to support staff is less clear. A library can have too many support staff or not enough depending entirely on how support staff are utilized and what is defined as "librarian's work". Standards call for librarians to make up 25-35 percent of the total staff.[5] This provides a ratio of about 1:3 (25 percent) to 1:1.9 (35 percent). Librarians make up over 40 percent of the total staff in the average library in this study (see TABLE IV).

TABLE IV
Librarians Per Support Staff

Mean	1:1.47
Median	1:1.43
Range	1:.64 - 1:2.23

In examining staffing in college libraries, the use of student assistants cannot be overlooked. Student aides are being called upon to perform an increasing number of library tasks particularly in smaller college libraries. Student assistants are a major component in staffing these twenty college libraries (see TABLE V).

TABLE V
Hours of Student Assistance

Mean	17,390
Median	16,896
Range	4,208 - 31,064

Hours of student assistance becomes much more meaningful when they are translated into a full-time equivalent number of support personnel. If an FTE support position is defined as 35 hours a week, 50 weeks a year, 1,750 hours of student assistance equals one full-time support staff position. TABLE VI looks at the hours of student assistance in terms of FTE support staff positions. The average library, in this study employs more student assistants than they do FTE support staff.

TABLE VI
Hours of Student Assistance in Full-Time Support Staff Equivalents

	FTE 35 HOURS PER WEEK	37.5 HOURS PER WEEK	40 HOURS PER WEEK
Mean	9.93	9.27	8.6
Median	9.65	9.01	8.4
Range	2.40 - 17.75	2.24 - 16.56	2.1 - 15.53

In looking at the staffing levels of these twenty college libraries it is important to look at the activity levels within them. More important than collection size in suggesting the size of the staff is the amount of activity generated by that collection. What are the levels of library use? A heavily used library will require more staff than a lightly used library of the same size. Standards or norms of any type should also reflect the level of service the library provides. The public service output measures presented in TABLE VII are by no means the only output measures that could be used. They are however, the only ones that were collected by the group. Research does indicate that there is a positive relationship between circulation activity and reference transactions.[6] There is also evidence to suggest that turnstile counts may be one of the best indicators of public service activities.[7] It has been documented that a strong relationship exists between the level of library use and reference service.[8]

TABLE VII
Circulation and Interlibrary Loan Transactions

	GENERAL CIRCULATION	CIRCULATION PER STUDENT	TOTAL ILL TRANSACTIONS
Mean	50,392	37.5	2,804
Median	45,376	31	1,882
Range	14,823 - 106,581	16 - 85	438 - 5,787

A quick calculation of correlation between selected variables and professional staff size is given in TABLE VIII. Circulation as an output measure accounts for 62 percent of the variance in professional staff size among these twenty midwest libraries. Three elements of formula B of the Standards accounts for only 45 percent of the variance. The output measure interlibrary loan was not significantly correlated with professional staff size.

TABLE VIII
Correlations with Professional Staff

PROFESSIONAL STAFF

VARIABLE	CORRELATION	SIGNIFICANCE
Circulation and Volumes Added	.808	$p < .01$
Circulation	.787	$p < .01$
Volume Total and Circulation	.787	$p < .01$
Volume Total, Volumes Added, Enrollment	.671	$p < .01$
Volumes Added	.620	$p < .01$
Volume Total	.616	$p < .01$
Interlibrary Loan	.381	not significant

As with professional staff, total staff size was significantly correlated with circulation and volumes added. These two measures accounted for 59 percent of the variance in total staff size. It is interesting to note that circulation and volumes added is the ranking variable in exploring both total staff and professional staff. But in predicting total staff, circulation is ranked fourth compared with second as predictor of professional staff.

TABLE IX
Correlations with Total Staff

TOTAL STAFF

VARIABLE	CORRELATION	SIGNIFICANCE
Circulation and Volumes Added	.769	$p < .01$
Volume Total, Volumes Added, Enrollment	.720	$p < .01$
Volume Total and Circulation	.709	$p < .01$
Circulation	.701	$p < .01$
Volumes Added	.674	$p < .01$
Volume Total	.620	$p < .01$
Interlibrary Loan	.245	not significant

In examining output measures that might explain staffing relationships it was discovered that the number of reference questions was more a function of enrollment than circulation levels. But circulation was more a function of volume total than enrollment.

TABLE X
Correlations with Reference Questions

REFERENCE QUESTIONS

VARIABLE	CORRELATION	SIGNIFICANCE
Enrollment	.786	$p < .01$
Circulation	.484	$p < .05$

TABLE XI
Correlations with Circulation

CIRCULATION

VARIABLE	CORRELATION	SIGNIFICANCE
Volume Total	.791	$p < .01$
Enrollment	.535	$p < .01$

While this information on staffing levels and output measures may be helpful in trying to establish norms they do not allow us to get to the vital issue of how library personnel are utilized. A library may have an adequate number of staff according to standards or norms, but have a poorly configured staffing arrangement. What is the staffing configuration for an active and efficient library?

What is most significant about these quick notes and probings is the questions they raise. What is the relationship between staff size and output

measures? What is the percentage of staff in public and technical services? What is the ratio of librarians to support staff and how does it vary between public and technical services? Much work needs to be done to establish norms and guidelines for staffing college libraries. These guidelines should reflect not only size of the collection but activity levels within libraries.

REFERENCES

1. "Standards for College Libraries," College & Research Libraries. 36: 277-79, 290-301 (Oct. 1975).
2. Ray L. Carpenter, "College Libraries: A Comparative Analysis in Terms of the ACRL Standards," College & Research Libraries. 42: 17 (January 1981).
3. "Standards for College Libraries," p. 291.
4. Carpenter, "College Libraries," p. 16.
5. "Standards for College Libraries, " p. 292.
6. Stephen P. Harter and Mary Alice S. Fields, "Circulation, Reference and the Evaluation of Public Library Service," RQ 18: 2, (Winter 1978) p. 151.
7. Marjorie E. Murfin, "National Reference Measurement: What Can It Tell Us About Staffing," College & Research Libraries. 44: 324 (September 1983).
8. John J. Regazzi and Rodney M. Hersberger, "Library Use and Reference Service: A Regression Analysis." Paper presented at ALA Conference, July 18-24, 1976, Chicago, IL (ED 129219).

SELECTED LIBRARY STATISTICS

The attached list represents the efforts of five four-year colleges in northeastern Pennsylvania to come to a better understanding of each other's operations. All of the libraries are within twenty miles of each other. Three of the colleges represented are in direct competition with each other. While there is competition, there is also a long history of library cooperation among these colleges.

The collection instrument uses a modified version of an instrument developed by the Council of Independent Colleges to examine staffing levels. What is very useful about the list is that staffing levels are broken down by service area for professional and support staff. While the list is not big, it does serve a local need for accurate comparative data. The list continues to evolve as the need for different types of information develops.

SELECTED LIBRARY STATISTICS FOR 1982-1983
Prepared by Terrence Mech
King's College

	College Misericordia	King's	Marywood	U. of Scranton	Wilkes
Library Expense as % of E and G	3.8	4.64	4.95	4.7	3.98
Library Expense as % of Instructional Expenditures	10.02	11.75	11.43	10.2	10.43
Library Expenditures per FTE Student	201.69	230.32	248.31	200.01	228.03
Support Staff per Librarian	1.6	2.39	1.1	1.38	.88
FTE Student per Librarian	324	475	216	436	269
Salaries and Wages (excluding student help) as % of Library Expense	57	54	68	45	43
Library Materials as % of Library Expense	24	28	24	36	42

	College Misericordia	King's	Marywood	U. of Scranton	Wilkes
Total FTE September 1982	974	1,903	2,169	3,926	2,421
Graduate FTE September 1982	30	---	422	323	138
Total FTE Faculty September 1982	90	116	169	186	176
Volumes Held End of Fiscal Year 1982-83	78,167	155,540	168,760	196,624	180,974
Bound Volumes Added During Fiscal Year	2,880	3,122	4,411	7,699	5,463
Periodicals Received	782	786	1,143	1,534	1,250
Microform Equivalent Volumes Held End of Fiscal Year 1982-83	3,062	69,348	11,296	11,183	405,882
Microform Equivalent Volumes Added During Fiscal Year	264	3,851	2,114	2,461	15,679
Library Materials Circulated to Library Users	25,618	24,327	90,096	35,228**	38,893
Interlibrary Loans Sent to Other Libraries	282	216	477	506	543
Interlibrary Loans Received From Other Libraries	397	230	285	1,189	368
Items Loaned Through Direct Borrowing	26*	2,028	851	238	1,543
Number of Hours Open per Typical Week	82	91	87	94.5	91

*Not a complete years count.
**Does not include reserves and periodicals.

Library Expenditures	College Misericordia	King's	Marywood	U. of Scranton	Wilkes
Salaries and Wages	96,687	201,904	303,348	303,683	203,005
Fringe Benefits	15,444	36,912	64,853	53,747	35,957
Contributed Salaries	---	---	71,725	---	---
Student Wages	22,842	43,957°	18,926	47,187	41,000
Books	19,145	82,530	71,735	134,383	131,000
Periodicals	26,911	30,820	49,331****	109,032	88,000
Microforms	2,204	6,523	incl. above	14,810	8,850
Audio-Visual Library Materials	2,400	4,220	8,304	13,385	5,000
All Other Library Materials	---	---	---	14,848	---
Binding	---	3,328	5,000	10,141	7,400
OCLC Expenses	---	11,858***	4,403***	18,534	14,000
All Other Library Operating Expenses	10,816	16,265	12,700	65,514	17,850
TOTAL LIBRARY EXPENDITURES	196,454	438,317	538,600*****	785,264	552,062

***First year as OCLC member.
****Includes Microforms.
*****Does not include contributed salaries.
°Includes Student white card (18,012) and work-study.

Library Personnel	College Misericordia	King's	Marywood	U. of Scranton	Wilkes
Service Months****** of Librarians and Professional Staff by Function					
Administrative Services	10.8	12	12	16	12
Technical Services	12.1	18.2	72	40.2	48
Public Services	13.1	17.8	36	51	48
TOTAL SERVICE MONTHS LIBRARIANS AND PROFESSIONAL STAFF	**36**	**48**	**120**	**108**	**108**
Service Months of Support Staff by Function					
Administrative Services	---	12	12	12	12
Technical Services	39.6	67.2	84	57.6	48
Public Services	24.4	36	36	80.4	36
TOTAL SERVICE MONTHS OF SUPPORT STAFF	**60**	**115**	**132**	**150**	**96**
Service Months of All Library Personnel					
Adminstrative Services	10.8	24	24	28.8	24
Technical Services	51.7	85.2	156	97.8	96
Public Services	33.5	53.8	72	131.4	84
TOTAL SERVICE MONTHS OF ALL LIBRARY PERSONNEL	**96**	**163**	**252**	**248**	**204**
Hours of Student Assistance	6,818	13,120	5,650	13,853	7,403

******A service month is equivalent to one individual working full-time for one month. A person who works half-time for 9 months of the year would be computed as 4.5 (.05 x 9) service months per year. A person on a 12 month contract all 12 months are prorated, even though one month is assumed to be a vacation period.